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ABSTRACT

This paper presents a theoretical model for representing the teaching/learning triangle and offers an agenda for research and development in this area. The theoretical framework for considering the teaching/learning triangle is based on determining the characteristics of the teacher, student, and patient/client and the dynamic realtionships between them that lead to effective teaching and learning while maintaining patient/client satisfaction with professional services rendered. A review of the literature reveals that most research studies on this topic have focused on one or more of the components of the triangle or on one or more of the relationships. The proposed research agenda focuses on determining the characteristics of effective clinical experiences for professional students from the perspectives of the teacher, learner, and the patient/client, and the relationships between each of the three participants. It is also suggested that collaborative research and development should be promoted on the teaching/learning triangle between investigators in different professions. (JD)

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The Teaching/Learning Triangle of Professional Education: Implications for Research and Development.

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The Teaching/Learning Triangle of Professional Education: Implications for Research and Development

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Introduction

Clinical education in the professions has traditionally depended upon direct practice and application of the profession being taught/learned, generally in the presence of a patient or client. Since these experiences have required direct supervision by faculty or other more experienced learners, these teaching/learning experiences have generally been characterized as a learning triangle consisting of faculty (or other teacher), student, and patient/client. This presentation presents a theoretical model for representing the teaching/learning triangle, briefly reviews the literature on the triangle of teaching/learning in professional education and proposes an agenda for research and development in this area based on the theoretical model.

Perspective(s) or theoretical framework

The triangle of teacher, learner, and patient/client is at the core of most of clinical professional education. While this model exists in most clinical professional education, little comprehensive research has been conducted on the topic. The authors' theoretical framework for considering the teaching/learning triangle is based on determining characteristics of the participants in the triangle and the dynamic relationships between participants that lead to effective teaching and learning while maintaining patient/client satisfaction with the professional services rendered. For example, how does the teacher's previous knowledge of the patient/client and his/her condition or problem influence the student's educational experience resulting from that patient/client interaction? Similarly, how does the teacher's relationship with the student affect the student's experience and how does the student's level of involvement or amount of responsibility in caring for the patient or client affect the student's experience and the patient or client's care? A central feature of this theoretical framework is the paradox that students attempt to learn clinical material from interactions with actual patients/clients in a trial-and-learn fashion without the luxury of making mistakes. By determining those characteristics and relationships that lead to effective teaching and learning, professional educators could better select or schedule patients or clients to be cared for or served by students in that profession.

Various aspects of the three legs of the triangle have been studied, focusing primarily on characteristics of effective teachers, level of learner involvement with the patient/client, and effect of the presence of the learner on patient satisfaction. Rarely are all aspects of the participants and their relationships within the triangle addressed simultaneously regarding educational outcomes such as learner satisfaction and learner acquisition of new knowledge, attitudes, and skills. Therefore, while there has been a substantial amount of educational research that implicitly acknowledges and addresses the triangle, there are still explicit gaps in understanding and implementing the triangle since there is no comprehensive view of what is known and not known about the triangle of teaching/learning in professional education.

Whenever one identifies an area or concept that appears to be relatively de-emphasized or ignored by other researchers, one is always torn between the excitement of being the "first" to examine this concept from a particular perspective and the fear that the reason the concept is not reported in the literature is because others have tried similar approaches and have been unable to explore the concept due to a variety of problems. Educational researchers have addressed numerous complex teaching and learning constructs and variables at all level of education using highly sophisticated research methodologies. Aptitude-treatment interaction (ATI) is a proven research method that might be appropriate for addressing the triangle. As reported by Corno and Snow (1987) in their chapter in the

third edition of the Handbook of Research on Teaching, ATI phenomena are usually complex and not readily generalized to other settings. The complex constructs and variables present within a teaching/learning triangle for clinical education might prove too complex for ATI research to explain or interpret.

As Weinholtz (1988) stated in a discussion of approaches to the study of clinical teaching in medicine, "Researchers studying clinical teaching must find ways of capturing the richness of such teaching while isolating those particular aspects that are associated with predictable outcomes. For such research to be of any real value it must be converted for use by clinical teachers. The results should find their way back to clinical teachers and help those teachers to enhance their art." The obvious, yet perhaps contradictory, need to be as descriptive and specific as possible while still leading to research that has practical application, indicates how complicated the issues are that relate to this line of research. This presentation will attempt to propose some strategies to address the gaps in previous research efforts.

Review of the Literature

The majority of the literature reviewed during this presentation comes from the medical education, teacher education, and family therapy literature. Additional perspectives from counseling education, psychology, and legal education are also provided.

Dinham and Stritter (1986) reviewed the literature on research in professional education and presented their findings in terms of research on the apprenticeship model of clinical education, primarily from medicine, dentistry, and nursing. The literature they cited for clinical education focused primarily on sites for clinical learning, characteristics and teaching behaviors of clinical instructors, additional teaching approaches beyond the one-on-one apprenticeship model, evaluation of students, and evaluation of clinical teaching. Little or no work related to the components of the teaching/learning triangle of professional education was presented.

Magraw (1974) discussed the relationships between teacher, student, and patient in three different medical education settings, the academic medical center, public hospital, and private community hospital and how medical student education differed in each of these settings. In the 15 years since Magraw's report, the concern over the triangle of medical education has continued with new governmental regulations affecting the hospital-based triangle while simultaneously more education has shifted to the ambulatory setting where the conditions affecting the teaching/learning triangle are equally as diverse and challenging. The research that has been conducted on clinical teaching in the ambulatory setting has focused on either the teacher or the student and rarely examines the interactions between student, teacher, and patient and the effects of the strengths of these interactions on student learning and satisfaction, teacher satisfaction, patient satisfaction, and/or economic effect on the patient care operations. Most of this research has been conducted with students in family practice preceptorship and clerkship experiences.

In 1987 Schwenk and Whitman discussed various characteristics of the physician-patient and teacher-learner relationship in the hospital and ambulatory setting in their book on teaching skills for physician faculty. However, there was little discussion or consideration of how the student-patient relationship similarly affects the educational outcome of the teacher, learner, and patient interactions in medical education.

Boydell (1986) reviewed the literature on supervision of student teachers in their practice teaching activities. Many of the studies she reported focused on the triad of the supervisor from the college or university, the student teacher, and the cooperating teacher in whose classroom the student teaching was completing his/her student teaching. While a different type of triad from the ones described in the health professions education literature, the literature still reflected the large gaps in what is known about how the relationships between the members of the triad affect ultimate educational outcomes. Boydell proposed a number of alternative approaches to the current process, including substantially changing the supervisor's role.

Strouse (1974) also discussed various aspects of the triad in student teaching and the supervision of student teaching, including the importance of the degree of commitment that each member of the triad brings into each situation. Kagan (1988) reviewed the literature on supervision of counselors-in-training and student teachers and concluded that research in teacher education was lagging behind counselor education in the area of supervision of field experiences. She recommended an extensive research agenda to improve teacher education research that included research on structural and contextual variables, exploring change over time, and examining the relevance of complex thinking and social cognition.

While not specifically mentioning a triangle, Carkhuff and Berenson (1977) discussed the importance of the teacher-student relationship in the training of counselors and therapists by continually comparing this relationship to the relationship that exists between the counselor or therapist and his/her patients. These authors stressed the importance of the notion that the individual in the role of the teacher or counselor is designated as "more knowing" and must pass on to the student or patient who is "less knowing," all that the "more knowing" individual has learned in his or her experiences in the relevant area.

Piercy was editor of a book published in 1986 that addressed issues of education for family therapists, including styles of teaching and supervision, including an apprenticeship style. The contributors to the book presented several models of teaching/learning including ones that consider the triad of teacher, student, and patient/client. Educational methods including role-playing, analyzing videotape sessions, observation via videotape equipment and one-way mirrors, live supervision, pre- and post-session discussion, and extensive feedback were discussed. Wheeler, Avis, Miller, and Chaney discussed the crucial importance of developing a relationship between the supervisor and the student and proposed the use of contracting and developing mutual responsibility for evaluation while Keller and Protinsky proposed that supervision models have to be suitable for the content being taught and that the ultimate goal of supervision is a combination of nuturing learner growth and providing tips on technical aspects of working with patients.

Kniskern and Gurman reported the status, issues, and directions of research on training in marriage and family therapy in 1979 and at that time were unaware of any empirical study of the process or outcome of training programs in family therapy. The authors proposed questions for research on supervision as a training method that included numerous methodological issues.

McKenzie, Atkinson, Quinn, and Heath (1986) reported the results of a national survey of training and supervision in marriage and family therapy and reported the most effective method was perceived to be live supervision with immediate feedback although it was not the most frequently used method. Those who did not use live supervision noted its disruption of the therapeutic process and the dependence it fosters on the supervisor. The authors also reported similar findings to those of Kniskern and Gurman when they stated that research on training and supervision in family therapy consisted largely of clinical observations and descriptions of specific training models

In 1988, Liddle and Davidson presented family therapy trainees' perceptions of supervisor competence. Variables identified by the authors included supervisor's relationship skills such as humor, sensitivity, communication, respect, challenge, support, and enthusiasm, directness and clarity of supervisory feedback, clear and concrete conceptualization ability, supervisor role modeling and supervisor provision of guidance, structure, a teaching flexibility that adjusts to the trainee's level, direct teaching, and guidance in the trainee's self-assessment,

Although supervision of graduate psychology students working on their thesis research may not be considered strictly as clinical professional education, research reported by Rugg and Norris in 1975 has application to clinical professional education. The authors examined student ratings of faculty-supervisory behavior in individualized, non-classroom, graduate level educational experiences and reported that factors such as supervisor expertise, accessibility, and rapport correlated highly with positive student ratings of their supervisor.

Cramton discussed similarities and differences between legal and medical education in 1986. He identified a clear difference in emphasis on clinical teaching between the two professions, with law

devoting a considerable lesser amount of time to clinical training of its students. He also discussed the lack of systematic apprenticeships in law, with the result that many law school graduates learn practical skills from their colleagues and often at the expense of their clients in the "real" world rather than in the somewhat sheltered environment of residency training that is afforded physicians. The differences identified by Cramton illustrate the paradox of having to provide students in all professions the opportunity to learn by trial-and-learn on actual patients or clients without being able to fail.

Findings from the Literature and the Triangle

The teaching/learning triangle of clinical professional education presented in Figure 1 consists of three major components, the teacher, the learner, and the patient/client, and three major relationships, the teacher-learner relationship, the teacher-patient/client relationship, and the learner-patient/client relationship. Most of the research in the literature has focused on one or more of the components of the triangle or on one or more of the relationships.

The importance of the relationships between those involved in teaching and learning experiences was stressed by several authors. Variables of the individuals involved in the triangle and its relationships can be derived from research proposed by several of the authors. In Table 1 we have taken variables suggested from the literature and have added some of our own to develop proposed variables and theoretical bases for exploring the three components and relationships of the triangle.

An Agenda for Research on the Teaching/Learning Triangle

Based on the theoretical framework and the variables and theoretical bases presented in Figure 1 and Table 1, we have developed, the following agenda for further research into the role of the triad of teacher, learner, and patient/client in professional education.

1) **Determine characteristics of effective clinical experiences for professional students from the perspective of**
    1) the teacher,
    2) the learner,
    3) the patient/client, and
    4) the relationships between each of the three participants.

Most of the previous efforts at research on the teaching/learning triangle in professional education have focused on characteristics of effective teachers, good students, and the content of the experiences. We propose that the research be focused on a different level to examine how the interaction of teacher, student, and patient/client affect the quality of the educational experience in clinical settings. Data on the characteristics of effective clinical experiences should be collected from teachers, students, and patients in different types and levels of clinical experiences in professional education using the variables identified in Table 1. Instruments should be developed to assess patient/client demographics as well as measure student satisfaction, student learning, faculty satisfaction, patient/client satisfaction, and intensity of the relationship between student and teacher, teacher and patient/client, and student and patient/client. The data collected with these instruments would be used to develop a profile of patient/client characteristics and patient-teacher relationships which promote effective educational experiences in clinical professional education.

Methods that could be used to collect these data include extensive direct observation, collection of self-reported data from all three participants in the triangle for a single encounter, use of videotape and audiotape recordings of all the participants in encounters, use of simulated and/or trained patient/clients to assess the activities of teachers and learners in triangle activities, and new classification of encounters between professionals and their patients/clients.

In 1988 Carey and Bennard reported research that could serve as an example of beginning research on assessing components of the triangle in medical education. The authors assessed medical residents' perceptions of the level of involvement of three different types of teachers who supervised them during patient care activities in an ambulatory clinic. There were clear differences between the three types of teachers for three of the five types of teacher-learner-patient involvement examined by the authors.

2) **Promote collaborative research and development on the teaching/learning triangle between investigators in different professions.**

As Kagan (1988) showed in her report, there are similarities in the apprenticeship experiences of counseling students and student teachers. Experts in professions with similar constraints and conditions affecting clinical education should join forces to study the characteristics that promote effective applications of the teaching/learning triangle. Teaching and research techniques that are effective in one clinical setting should be experimented with in other clinical professional education settings. For example, the triad of supervisor, student teacher, and cooperating teacher from student teaching field experiences may offer strategies and techniques suitable for adaptation to health professions education.

In the initial volume of Health Communication, three authors reviewed issues related to research on communication between health care professionals and their patients that might be relevant to all clinical professional education. Korsch (1989) reviewed current issues in health communication research and concluded that features of health care process other than communication affect patient satisfaction and compliance. These features include continuity of care and certain personality features of providers and patients. Kreps stressed the importance of promoting collaboration between those researchers in various academic disciplines that are interested in studying health communication. These disciplines include communication, the various health professions, public health, education, and psychology. Smith reviewed various issues relevant to studying health communication and suggested that if communication is complex, multivariant, and interrelated, it is not reasonable to expect a single variable to answer very many questions about how to maximize the relationship between providers and patients.

The family therapy training literature also provides numerous examples that could be applicable to other areas of professional education. In 1983, Liddle and Schwartz presented guidelines to be used when using live supervision techniques to train family therapists. This training model uses a triangle of a supervisor, therapist-trainee, and family/client with the supervisor observing via a one-way mirror or closed-circuit television system and remaining in contact with the trainee via telephone, earphones, by the supervisor entering the room, or with the trainee leaving the room to consult with the supervisor. The factors considered by the supervisor during live supervision include degree of difficulty and complexity of the interaction between supervisor and trainee, complexity of the process and content of the trainee-client relationship, characteristics of the client/family, level of the trainee, and relationship between the trainee and supervisor. "Trainees will learn most effectively if their focus can remain on the content of the session rather than on the evaluative aspects of the live supervision context." These factors could be explored in the context of training in other professional fields.

Liddle, Breulin, and Schwartz were editors of the Handbook of Family Therapy Training and Supervision published in 1988. In this handbook, Nichols presented six assumptions for education and training in family therapy in his chapter that could be modified and applied to other professions including "Clinical training and supervision should approximate the kinds of clinical settings and circumstances that students can expect to encounter in the real world of practice" and "The educational/training program's needs take precedence over the service needs of the case." Nichols also proposed that the actual process involved in the supervision of the learner as he/she cares for the patient/client may vary from time to time, depending on the stage of the case, the dynamics of the patient/client, the needs of the student, and other considerations.

Summary

The teacher, learner, and patient/client triangle is essential to clinical professional education. Without access to patients and clients, professional students would not be able to practice the application of the knowledge and skills of their professional training. As various economic and governmental forces affect the availability of patients and clients, it will become more imperative to utilize these valuable resources as efficiently as possible. Little is known about certain aspects of the teaching/learning triangle and the importance of the relationships of the individuals in the triangle on educational outcomes. This presentation has proposed a theoretical framework for exploring the

triangle, has reviewed the related literature, and has proposed an agenda for research and development in this area.

FIGURE 1

TEACHING/LEARNING TRIANGLE OF PROFESSIONAL EDUCATION

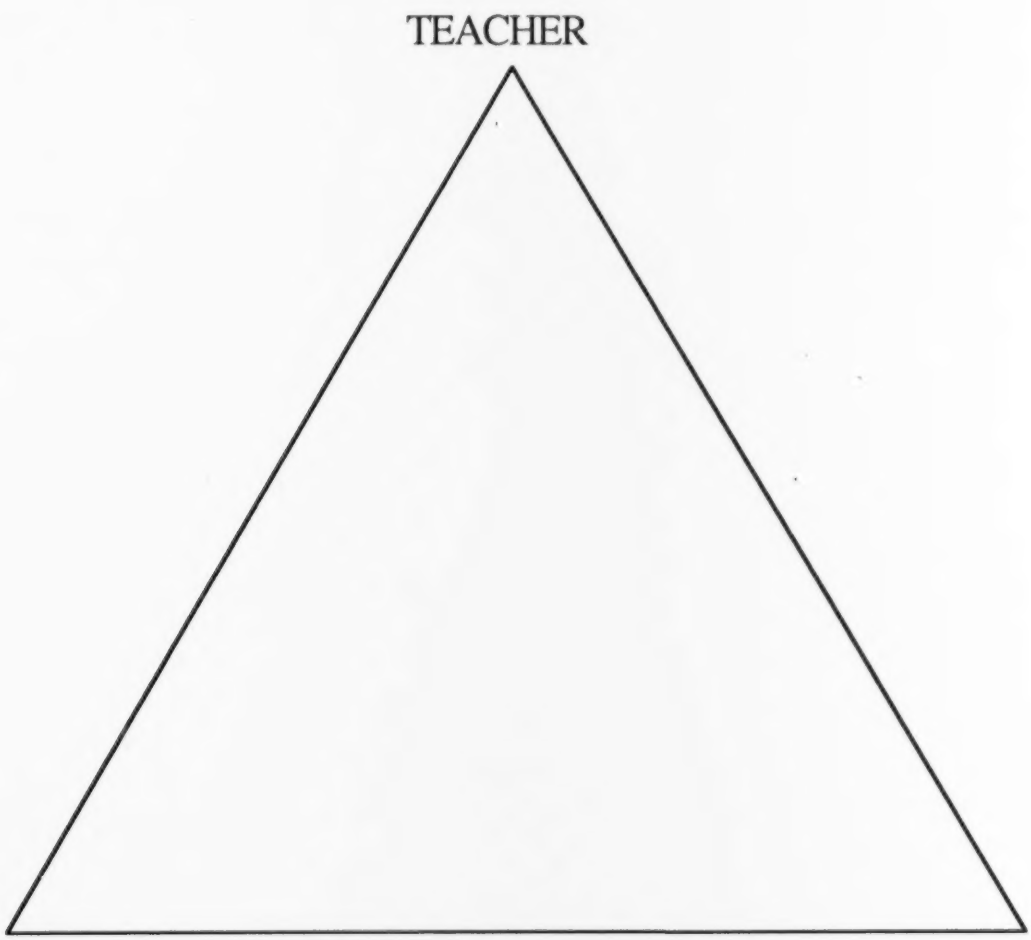

TABLE 1

Model Component or Relationship	Variables, theoretical basis
Teacher	• attitudes toward teaching and students • gender • teaching behaviors • level of clinical experience • level of teaching experience • willingness to "abdicate" responsibility • level of comfort with patient/client, problem, situation
Learner	• prerequisites • level of experience • preferences for certain teaching styles/behaviors • gender • age • career direction/plans
Patient/client	• age • gender • problem or condition • knowledge of teacher • knowledge of learner • expectations of learner
Teacher-learner relationship	• role modeling • teacher knowledge of learner • teacher knowledge of learner's learning style
Teacher-patient/client relationship	• role modeling • doctor-patient relationship • doctor-patient communication • knowledge of patient/client • knowledge of problem/condition • teacher comfort with patient/client, problem, situation • degree of uncertainty in relationship
Learner-patient/client relationship	• level of learner involvement • amount of learner responsibility • learner knowledge of patient • learner knowledge of problem/condition

References

Boydell, Deanne. Issues in Teaching Practice Supervision Research: A Review of the Literature. Teaching and Teacher Education. 2(2): 115-125, 1986.

Carey, Timothy S., and Bennard, Bruce. Involvement of Three Types of Preceptors with Residents in an Ambulatory Care Clinic. Journal of Medical Education. 63(6): 479-482, June 1988.

Carkhuff, Robert R., and Berenson, Bernard G. Beyond Counseling and Therapy, 2nd ed. New York: Holt, Rinehart and Winston, 1977.

Corno, Lyn, and Snow, Richard E. Adapting Teaching to Individual Differences Among Learners. In Merlin C. Wittrock (ed.) Handbook of Research on Teaching, 3rd ed. New York: Macmillan Publishing, 1986, 602-629.

Cramton, Roger C. Lessons for Medicine From Legal Education. Health Affairs Quarterly. 34-46, Fall 1986.

Dinham, Sarah M., and Stritter, Frank T. Research on Professional Education. In Merlin. C. Wittrock (ed.) Handbook of Research on Teaching, 3rd ed. New York: MacMillan Publishing, 1986, 952-970.

Kagan, Dona M. Research on the Supervision of Counselors- and Teachers-in-Training: Linking the Two Bodies of Literature. Review of Educational Research. 58(1): 1-24, Spring 1988.

Keller, James F., and Protinsky, Howard. Family Therapy Supervision: An Integrative Model. In Fred P. Piercy (ed.) Family Therapy Education and Supervision. New York: Haworth Press, 1986, 83-90.

Kniskern, David P., and Gurman, Alan S. Research on Training in Marriage and Family Therapy: Status, Issues, and Directions. Journal of Marital and Family Therapy. 5(3): 83-94, July 1979.

Korsch, Barbara M. Current Issues in Communication Research. Health Communication. 1(1): 5-9, 1989.

Kreps, Gary L. Setting the Agenda for Health Communication Research and Development: Scholarship that can Make a Difference. Health Communication. 1(1): 11-15, 1989.

Liddle, Howard A., Breulin, Douglas C., and Schwartz, Richard C.(eds.) Handbook of Family Therapy Training and Supervision. New York: Guilford Press, 1988.

Liddle, Howard A., Davidson, Gail S., and Barrett, Mary Jo. Outcomes of Live Supervision: Trainee Perspectives. In Howard A. Liddle, Douglas C. Breulin, and Richard C. Schwartz (eds.) Handbook of Family Therapy Training and Supervision. New York: Guilford Press, 1988, 386-398.

Liddle, Howard A., and Schwartz, Richard C. Live Supervision/Consultation: Conceptual and Pragmatic Guidelines for Family Therapy Trainers. Family Process. 22(4): 477-490, December 1983.

McKenzie, Paul N., Atkinson, Brent J., Quinn, William H., and Heath, Anthony W. Training and Supervision in Marriage and Family Therapy: A National Survey. American Journal of Family Therapy. 14(4): 293-303, Winter 1986.

Magraw, Richard M. Relationships Between Teacher, Student, and Patient. J.A.M.A. 224(2): 225-228, April 9, 1973.

Nichols, William C. An Integrative Psychodynamic and Systems Approach. In Howard A. Liddle, Douglas C. Breulin, and Richard C. Schwartz (eds.) Handbook of Family Therapy Training and Supervision. New York: Guilford Press, 1988, 110-127.

Piercy, Fred P. (ed.) Family Therapy Education and Supervision. New York: Haworth Press, 1986.

Rugg, Edwin A., and Norris, Raymond C. Student Ratings of Individualized Faculty Supervision: Description and Evaluation. American Educational Research Journal. 12(1): 41-53, Winter 1975.

Schwenk, Thomas L., and Whitman, Neal. The Physician as Teacher. New York: Williams & Wilkins, 1987.

Smith, David H. Studying Health Communication: An Agenda for the Future. Health Communication. 1(1): 17-27, 1989.

Strouse, John P. Human Relations in the Student-Teaching Triad. In James A. Johnson, and Floyd Perry (eds.) The Supervision of Clinical Experiences in Teacher Education: Selected Readings and Sources. Dubuque, IA: Kendall/Hunt Publishing, 1974, 64-67.

Weinholtz, Donn. How Clinical Teaching is Studied. In Janine C. Edwards and Robert L. Marier (eds.) Clinical Teaching for Medical Residents: Roles, Techniques, and Programs. New York: Springer Publishing Co., 1988, 129-154.

Wheeler, Dorothy, Avis, Judith A., Miller, Lorie A., and Chaney, Sita. Rethinking Family Therapy Education and Supervision: A Feminist Model. In Fred P. Piercy (ed.) Family Therapy Education and Supervision. New York: Haworth Press, 1986, 53-72.